A Blueprint for Learning
Mathematics
Second Grade

The ***Blueprint for Learning*** is a companion document for the Tennessee Curriculum Standards which are located at www.tennessee.gov/education. Although the curriculum adopted by the State Board of Education in its entirety remains on the web for additional reference, this reformatted version makes the curriculum more accessible to classroom teachers.

Key features of the reformatted version are:

- All grades for each content area are provided in the printed manual.
- The skills within each grade are identified as to whether they are introduced, developed, or have been mastered and are now being maintained at that level.
- The skills correlating with the state criterion referenced test (CRT) are also identified for classroom instruction.
- In the Language Arts section, the assessed skills (performance indicators) are identified not only for the state's CRT in grades 3-8 but also for the writing assessment in grades 5 and 8.
- This guide makes the planning of instruction for students with varying abilities easier to accomplish.
- Teachers can plan and work together to improve school wide student achievement through curriculum integration across content areas and grade levels.
- Teachers can identify current grade level skills as well as those needed to prepare students for the next year.

Skills are coded and identified as Introduced (I), Developing (D), State CRT and Writing Assessed (A), and Mastered and Maintained (M).

- Introduced (I) skills are new skills presented at that grade level. Even though a skill is considered introduced at a grade level, some development would also occur.
- Developing (D) skills are skills that have been introduced at a previous grade level. At this stage of development the skills are being refined and expanded.
- Assessed (A) skills are those skills that are correlated to the state performance indicators for the CRT portion of the achievement test (grades 3-8) and the writing assessment (grades 5 and 8). The identified skills are formally assessed through the CRT; however, all skills are informally assessed in the classroom.
    - For the purpose of data reporting, assessed (A) skills are grouped into categories indicating related skills and knowledge. For example, grammar, mechanics, and usage are grouped together under the grammar (G) category. Each state assessed indicator included on the Blueprint carries a legend showing that it is assessed and indicating the category in which it will be reported (e.g., Assessed/Grammar=A/G).
- Mastered and Maintained (M) indicates a skill that has been introduced, developed, and assessed. Even though a skill may be formally assessed, the development and expansion of the skill sill continues.

KEY
I = Introduced D = Developing A = State Assessed M = Mastered

REPORTING CATEGORY
N = Number & Operations AT = Algebraic Thinking C = Computation R = Real World Problem Solving
DP = Data Analysis & Probability ME = Measurement G = Geometry GR = Graphs & Graphing

NOTE: "A" Indicates the state curriculum (CRT) assessment only.
All the skills ("I" … "D" … "A" … "M") are addressed in classroom assessment.

MATHEMATICS
Second Grade

NUMBER AND OPERATIONS

The student will identify, represent, order, and compare numbers and compute and solve problems.

Key	Reporting Category	
D		Count a set of objects to 100 by 2's, 3's, 5's, or 10's.
D		Count forward and backward by one from any number less than 999.
D		Read and write numerals to 999.
D		Identify the place value of a digit in numbers to 999.
D		Identify odd and even numbers to 100.
I		Use concrete models or pictures to show whether a fraction is less than 1/2, more than 1/2, or equal to 1/2.
D		Match the spoken or written word names and concrete or pictorial representations (parts of regions or parts of sets of objects) of halves, thirds, and fourths.
I		Compare the unit fractions 1/2, 1/3, and 1/4.
D		Determine the value of a collection of coins up to $1.00.
D		Order and sequence whole numbers less than 1000.
D		Compare two numbers using the appropriate symbol (i.e., <, >, and =).
D		Represent numbers to 999 in flexible ways using a variety of materials (e.g., 23 as 23 ones, 1 ten and 13 ones, and/or 2 tens and 3 ones).
D		Use and match numerals to ordinal numbers through twentieth.
D		Develop a story problem that illustrates a given addition or subtraction number sentence.
I		Use the number line to demonstrate addition and subtraction.
I		Write and identify number sentences that describe situations involving addition and subtraction.
I		Write and explain related addition and subtraction sentences.
D		Solve story problems involving numbers to 100.
D		Check for the reasonableness of solutions.
D		Use calculators in problem-solving situations.
D		Add and subtract efficiently and accurately with single-digit numbers up to sums of 18.
D		Add and subtract two-digit whole numbers using a variety of strategies and representations.
D		Explain and justify solution strategies used in problem solving.
D		Use estimation to justify whether the answer to a computation is reasonable.

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ALGEBRA

The student will sort and classify objects; create, extend, and describe patterns; and represent number sentences with words, objects, and pictures.

D		Sort objects by two or more attributes.
D		Identify the rules by which objects or numbers have been sorted.
D		Extend a growing pattern, involving objects, shapes, or numbers.
D		Identify the unit of a three-part repeating pattern.
D		Translate a repeating pattern from one format to another (e.g., red-blue-blue to snap-clap-clap).
I		Determine the output number for a particular input number given a one-operation rule involving addition or subtraction.
D		Interpret and solve open sentences that involve addition or subtraction.
D		Communicate and use mathematical terms and symbols appropriately.
D		Show or represent number sentences, involving addition and subtraction and numbers 0-20, with concrete objects.
D		Demonstrate knowledge of and use the commutative property of addition.
I		Show that subtraction is not commutative.
D		Apply the addition and subtraction properties of 0 (adding or subtracting 0 doesn't change a given number).
I		Describe qualitative change (e.g., a student growing taller).
I		Describe quantitative change (e.g., a student growing 2 inches in 1 year).

GEOMETRY

The student will identify, describe, and create basic shapes and describe relative positions and directions.

D		Identify, build, draw, and compare two- and three-dimensional geometric figures.
D		Describe characteristics and parts of two- and three-dimensional geometric figures.
I		Identify shapes that have line symmetry.
D		Investigate and predict the results of combining and taking apart two- and three-dimensional geometric figures.
M		Identify the position of a whole number on the number line.
I		Illustrate flips, slides, and turns using concrete objects and pictures.

MEASUREMENT

The student will apply measurement concepts of time, length, weight, capacity, and temperature.

D		Compare and order objects according to length, capacity, and weight.
I		Demonstrate understanding of the concepts of perimeter and area.
I		Identify what can be measured about objects in the environment.
D		Identify time to the hour, half-hour, and quarter-hour.
D		Relate days, dates, weeks, and months to a calendar.

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D		Explain the relationship between inches and feet.
D		Measure length to the nearest centimeter, foot, half-inch, and inch.
I		Estimate lengths and time intervals.
I		Solve problems involving elapsed time in hours.
I		Measure and estimate weight and capacity using a variety of nonstandard units.
I		Find area and perimeter using nonstandard units.
D		Read thermometers with Fahrenheit and Celsius scales.

DATA ANALYSIS AND PROBABILITY

The student will make simple graphs using concrete objects and pictures and describe events as likely or unlikely.

I		Pose questions and gather data to answer the questions.
I		Read, interpret, and construct tables using tally marks.
D		Construct pictographs and bar graphs.
D		Interpret and solve problems with tables, bar graphs, and pictographs.
I		Predict outcomes of events based on data gathered and displayed.
M		Explain whether an event is likely or unlikely.

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